TIERRA SOLUTIONS, INC.

February 28, 2003

U.S. Environmental Protection Agency, Region II
Emergency and Remedial Response Division
290 Broadway, 19th Floor, Room W-20
New York, NY 10007-1866

Attention: Mr. Richard P. Winfield
Remedial Project Manager

Subject: Technical Meeting: EPA and Malcolm Pirnie
February 13, 2003
Passaic River Study Area
Administrative Order on Consent Index No. II-CERCLA-0117

Dear Mr. Winfield:

Please find attached to this letter, notes of the above-referenced technical meeting between EPA, Malcolm Pirnie, and Tierra Solutions. The following documents are included for a complete package of information discussed at the meeting:

- Meeting Notes
- Meeting Agenda
- Tierra's Slides
- Handouts
- Sign-in Sheet

In addition, and per your request, all of the documents attached to this letter are being submitted electronically, via e-mail, to your attention.

Sincerely,

C. Firstenberg

Clifford E. Firstenberg
Project Manager
On behalf of Occidental Chemical Corporation
(as successor to Diamond Shamrock Chemicals Company)

Attachment

393292

10th floor
Two Tower Center Blvd. East Brunswick, New Jersey 08816

2c: Section Chief
NJDEP-Bureau of Federal Case Management
401 East State Street - CN 028
Trenton, NJ 08625-0028
Attn: Jonathan D. Berg

1c: - Chief, New Jersey Superfund Branch
Office of Regional Counsel
U.S. Environmental Protection Agency
290 Broadway, 19th Floor, Room W-20
New York, NY 10007-1866
Attention: Diamond Alkali Site Attorney - Passaic River Study Area

MEETING NOTES
PRSA Technical Meeting
Tierra Solutions, Inc.; East Brunswick, NJ
February 13, 2003
1:30 – 4:00 PM

ATTENDEES

Tierra Solutions, Inc.
Clifford Firstenberg – Project Manager (Tierra)
Rick McNutt – Manager, Remediation (Tierra)
Robert Romagnoli – Project Manager (BBL)

U.S. EPA
Rick Winfield –Remedial Project Manager (EPA)
Bruce Fidler – Project Manager (Malcolm Pirnie)
Lisa Szegedi-Greco – Deputy Project Manager (Malcolm Pirnie)

ATTACHMENTS TO MEETING NOTES

- Meeting Agenda
- Slides
- Handouts
- Sign-in Sheet

NOTE: These meeting notes and the referenced attachments have also been provided to EPA in electronic format.

MEETING NOTES

1. Introductory Remarks

Rick Winfield explained the PEAP (Pre-Expansion Activity Plan) that EPA is preparing through its contract with Malcolm Pirnie. This work includes gathering all related information on the Passaic River Estuary, standardizing datasets, establishing a WEB site, developing and maintaining a Passaic library, developing a conceptual site model, and may include data collection. This effort is estimated to take 5-7 years.

- WEB site – is intended to be "public" site rather than governmental, to facilitate public access (i.e., "www.ourPASSAIC.org" rather than www.epa.gov....). EPA hopes to roll-out the WEB site within 6 months, but it will be a continually evolving site, with new information being added all the time.
- Library – the Passaic project library should soon be updated and available for inspection at EPA.
- Conceptual Site Model – will be developed by considering Tierra's conceptual food-web model, and that being developed for the HEP-CARP framework. It will include hydrodynamics, sediment transport, fate and transport, food web, and maybe toxicity, for the Lower Passaic River.

EPA's plan anticipates a team of expert advisors that will hopefully include the following individuals:

Fitzgerald (University of Connecticut) – mercury expert
Lick (University of California, Santa Barbara) – sediment transport
Blumberg (Stevens Institute) – hydrodynamics
DiToro (Manhattan College) – science

Rick Winfield explained that the PEAP (work plan) is a 'living document' and that it will be provided to Tierra and other stakeholders. As the project proceeds stakeholder review and input will be solicited.

The teams introduced themselves, including project roles.

See Action Items at the end of the Meeting Notes.

2. **Available Data Inventory**
   a. **Dates**
   b. **Locations / Spatial Extent**
   c. **Analytes and Detection/Reporting Limits**
   d. **Media Sampled**

See slides and handouts for details of Tierra's presentation.

- Rick Winfield asked what non-chemistry data Tierra had collected and provided to EPA. Tierra explained that these data (physical oceanographic, geotechnical, bathymetric) had been provided to EPA in hard copy as draft submittals. The final versions are planned for submission with the RI Report. Rick Winfield asked that Tierra prepare a list of the available non-chemistry data, and indicate the status for transferring electronically to EPA.
- During the discussion of available data, Rick Winfield indicated that Jim Lodge, Hudson River Foundation, may be releasing the HEP/CARP sampling data as early as March 2003. Tierra asked for copies of these data and supporting reports.
- Rick Winfield asked Tierra to provide to EPA an estimate of Tierra's "cradle-to-grave" cost for sampling. This would include preparation of work plans, sample collection, laboratory analyses, disposal of residuals, data validation, data analysis, populating the database, and reporting. Also, provide timeline.

See Action Items at the end of the Meeting Notes.

3. **Data Format**
   a. **Hard Copy (bound or unbound) / Electronic (file type)**
   b. **Data Fields**

See slides and handouts for details of Tierra's presentation. No specific discussion beyond clarification of Tierra's presentation.

4. **Data Quality / Validation Implemented**

See slides and handouts for details of Tierra's presentation. No specific discussion beyond clarification of Tierra's presentation.

5. **Coordinate Systems Used**

See slides and handouts for details of Tierra's presentation. No specific discussion beyond clarification of Tierra's presentation.

6. **Future Data Collection Plans**
   a. **Locations**
   b. **Analytes and Detection/Reporting Limits**
   c. **Media**
   d. **Frequency**

See slides and handouts for details of Tierra's presentation. No specific discussion beyond clarification of Tierra's presentation.

7. **Possible Mechanisms and Timing for Data Transfer**

The team agreed that the points of contact would be:

- Lisa Szegedi-Greco for Malcolm Pirnie
- Clifford Firstenberg for Tierra.
- Requests should be through Rick Winfield.

8. **GIS**

See slides and handouts for details of Tierra's presentation.

- Malcolm Pirnie asked to get copies of the GIS Shapefiles. To ensure that the appropriate files are transferred, Malcolm Pirnie was asked to submit formal request via e-mail.
- Tierra asked if Malcolm Pirnie would provide a list of the shapefiles that they have.

- Tierra noted that the planimetrics in the GIS were old (early 1980s) and therefore the shorelines may not exactly match field data (i.e., a near-shore sample collection point could plot-out on land). This is one of Tierra's major concerns over transferring the GIS layers to EPA and Malcolm Pirnie.
- Tierra confirmed that, without exception, samples collected by Tierra since 1995 have been located in the field using a Differential Global Positioning System, or, if bridges or other structures caused interference, a laser-range system of equal precision was employed. Some earlier samples collected by Tierra may have used this, or similarly performing technology such as microwave or other high-precision system. Tierra can not vouch for samples collected by other organizations such as EPA, NJDEP, etc.

9. Next Steps/Discussion

- The participants agreed that this should be the first of a series of Technical Meetings between EPA, Tierra, and Malcolm Pirnie. The next meeting will likely include a more detailed discussion of the PEAP. This meeting might be more effective at Malcolm Pirnie's office.
- Tierra was asked to provide to EPA its thoughts on the management structure for PRRI.

ACTION ITEMS

Tierra

- Prepare for EPA a list of the available non-chemistry data, and indicate the status for transferring electronically to EPA.
- "Cradle-to-grave" cost estimate for sampling to EPA. Also, provide timeline.
- Map of sampling locations to Malcolm Pirnie.
- Map of potential PCB sources impacting the PRSA to Malcolm Pirnie.

EPA/MPI

- EPA: Provide Tierra HEP/CARP data and reports when available.
- EPA: Provide Tierra copies of information provided to EPA by City of Newark (CSO Investigation).
- EPA: Provide Tierra with the PEAP (work plan) for review and discussion.
- EPA: Schedule Second Technical Meeting (approximately 6-8 weeks from today's meeting; mid-April).
- Malcolm Pirnie to request shapefiles from Tierra.
- Malcolm Pirnie to provide list of available shapefiles to Tierra.

PRSA Technical Meeting
February 13, 2003
East Brunswick, NJ

Agenda

1. Introductory Remarks

2. Available Data Inventory

   a. Dates
   b. Locations / Spatial Extent
   c. Analytes and Detection/Reporting Limits
   d. Media Sampled

3. Data Format

   a. Hard Copy (bound or unbound) / Electronic (file type)
   b. Data Fields

4. Data Quality / Validation Implemented

5. Coordinate Systems Used

6. Future Data Collection Plans

   a. Locations
   b. Analytes and Detection/Reporting Limits
   c. Media
   d. Frequency

7. Possible Mechanisms and Timing for Data Transfer

8. GIS

9. Next Steps/Discussion

Passaic River Study Area Technical Meeting

Tierra Solutions/USEPA/MPI
East Brunswick, NJ

February 13, 2003

Inventory of Available Data

- Information provided on Table 1 (handout)

Data Format

- Data have been organized and submitted in both electronic and hard copy format

- PRSA Database V.4.0 represents most recent version of electronic deliverable (8/30/02)

PRSA Database V.4.0

- Includes programs conducted between 1990 and 2001, both within and beyond the Study Area
  - Data collected by Tierra and others
  - Sediment chemistry (including radiochemical)
  - Tissue chemistry
- Sizeable Database
  - Contains data for more than 3,000 samples
  - Consists of more than 275,000 pieces of information/data
  - Represents approximately 1,000,000 pages of laboratory data sheets
- Deliverables to the USEPA
  - PRSA V. 1.0 (7/30/01)
  - PRSA V. 2.0 (12/31/01) - corrected several locational errors
  - PRSA V. 3.0 (5/29/02) - added non-PRSA data
  - PRSA V. 4.0 (8/30/02) - added 2001 biota data

Database Files on CD

- PRSA V.4.0.mdb
  - Access 97 database containing PRSA sediment and tissue chemistry data
  - One table ("PRSA DATA") contains all data
- PRSA V.4.0 Data Fields.xls (handout)
  - Summary of fields found in "PRSA DATA"
  - Provides description and data type
- PRSA V.4.0 Validation Status.doc (handout)
  - Lists all sampling programs in "PRSA DATA"
  - Describes extent of validation for each program
- PRSA V.4.0 Qualifier Definitions.xls (handout)
  - Description of all analytical result qualifiers in "PRSA DATA"
  - Fully validated data (validation qualifiers and lab qualifiers defined)
  - Partially validated/unvalidated data (reduced set of qualifiers explained and defined)

Data Quality/ Validation Implemented

- Level of data quality review varied for each program

- Information provided on Table 1 (handout)

Coordinate Systems Used

- All GIS layers are provided in NAD 27 State Plane New Jersey (see Table 2)

- Bathymetry vertical datum based on USACE Mean Low Water (2.3' or 2.4' below NGVD, depending upon location)

Future Data Collection Plans

- CSO Data
  - Will collect samples following USEPA approval of work plans
- Surface Water Chemistry Data
  - Development of work plan on hold per USEPA's January 2001 letter to Tierra

Overview of the Combined Sewer Overflow (CSO) Program

- Objectives of Program
  - Evaluate mass loading of contaminants released to the PRSA via CSO discharges
  - Use data to support human and ecological risk assessment

Overview of the CSO Program

- Basics of Program
  - Collect dry-weather and wet-weather CSO effluent samples from each CSO monitored
  - Collect solids and aqueous samples for analyses
  - Analyze the samples for targeted parameters
  - Program is anticipated to require 12 to 18 months for completion
- Status
  - Currently addressing comments provided on the Work Plan; will begin sampling soon after USEPA approval

Overview of Surface Water Sampling Program

- Objectives of Program
  - Assess annual and seasonal water column concentrations of potential COCs
  - Use data to characterize potential human health and ecological risks associated with surface water exposure pathways
  - Establish baseline conditions

- Status
  - Development of work plan on hold per USEPA's January 2001 letter to Tierra

GIS

- Geo-spatial database system
- Information provided on Table 2 (handout)

HAND OUTS

PRSA
Technical
Meeting

February 13, 2003

Table 1

Tierra Solutions, Inc.
Passaic River Study Area

Inventory of Available Data

Year	Sampling Event	Sample Matrix/Investigation Type	Implemented By	Validation Status	PRSA, Non-PRSA, or Both	In PRSA DB V. 4.0?
RI-RELATED SAMPLING PROGRAMS						
1995-1996	RI Sampling Program	Sediment, Surface Water, Hydrodynamics, Bathymetry	Tierra	Validated[1]	Both	x[1]
1999	Late Summer/Early Fall ESP Sampling Program	Sediment, Tissue, Surface Water, Ecological Habitat and Community Surveys	Tierra	Validated[2]	Both	x[2]
2000	Spring ESP Sampling Program	Sediment, Tissue, Surface Water, Ecological Habitat and Community Surveys	Tierra	Validated[2]	Both	x[2]
2001	Supplemental ESP Biota Sampling Program	Tissue	Tierra	Validated	PRSA	x
SUPPLEMENTAL SAMPLING PROGRAMS						
1983	USEPA Region II FIT Team Investigation	Sediment	USEPA	Unvalidated	PRSA	
1985	NJDEP 80/120 Lister Ave Site Evaluation	Soil/Sediment	NJDEP	Unvalidated	PRSA	
1986	Passaic River Sediment Study	Sediment	Tierra	Validated	Both	
1990	Surficial Sediment Investigation	Sediment	Tierra	Unvalidated	Both	x
1991	Core Sediment Investigation	Sediment	Tierra	Partially Validated	Both	x
1991	NOAA Phase I HRE Sediment Toxicity Investigation	Sediment	NOAA	Unvalidated	Non-PRSA	
1992	Core Sediment Investigation	Sediment	Tierra	Partially Validated	Both	x
1993	Core Sediment Investigation - 01 (March)	Sediment	Tierra	Unvalidated - QC review of data	Both	x
1993	Core Sediment Investigation - 02 (July)	Sediment	Tierra	Unvalidated - QC review of data	Both	x
1993	NOAA Phase II HRE Sediment Toxicity Investigation	Sediment	NOAA	Unvalidated	Both	
1993	USEPA Surficial Sediment Program	Sediment	USEPA	Unvalidated	PRSA	x
1993/1994	REMAP Study	Sediment	USEPA	Unvalidated	Both	
1994	Finfish and Benthic Invertebrate Survey	Tissue	Tierra	Unvalidated	PRSA	
1994	Surficial Sediment Investigation	Sediment	Tierra	Unvalidated - QC review of data	Both	x
1995	Biological Sampling Program	Surface Water, Tissue	Tierra	Validated	PRSA	x
1995	Sediment Grab Sampling Program	Sediment	Tierra	Validated	PRSA	x[3]
1995	USACE Minish Park Investigation	Sediment	USACE	Unvalidated	PRSA	x
1996	Newark Bay Reach A Sediment Sampling Program	Sediment	Tierra	Unvalidated	Non-PRSA	x
1997	Outfall Sampling Program	Sediment, Surface Water	Tierra	Unvalidated	Both	x[3]
1997	Newark Bay Reach B,C,D Sampling Program	Sediment	Tierra	Unvalidated	Non-PRSA	x
1998	Newark Bay Elizabeth Channel Sampling Program	Sediment	Tierra	Unvalidated	Non-PRSA	x
1999	Sediment Sampling Program	Sediment	Tierra	Unvalidated	Both	x
1999	USACE Drift Removal Monitoring Program	Surface Water	Tierra	Validated	Both	
1999	Newark Bay Reach A Monitoring Program	Surface Water	Tierra	Unvalidated	Non-PRSA	
1999	Newark Bay Reach A,B,C,D Baseline Sampling Program	Sediment, Surface Water	Tierra	Method Compliance Review	Non-PRSA	x[3]
1999/2000	CSO Trial Run Program	CSO Particulates, Physical Reconnaissance	Tierra	Validated	PRSA	
1999/2000	Minish Park Monitoring Program	Sediment	Tierra	Method Compliance Review	PRSA	x
2000	BioGenesis Sediment Collection Program	Sediment	Tierra	Method Compliance Review	PRSA	x
2000	TIE Investigation	Sediment	Tierra	Unvalidated	PRSA	
2000/2001	Creel/Angler Survey	Boat-based Counts, Land-based Interviews within PRSA	Tierra	Unvalidated	PRSA	

Notes:

[1] = Geotechnical and geochronological data for the 1995-1996 RI Sampling Program are not validated, and only sediment data are included in PRSA Database V. 4.0.

[2] = Ecological Habitat and Community Survey results have not been validated, and only sediment and tissue results are included in PRSA Database V. 4.0.

[3] = Surface Water data are not included in PRSA Database V.4.0

ESP = Ecological Sampling Plan

HRE = Hudson-Raritan Estuary

NJDEP = New Jersey Department of Environmental Protection

NOAA = National Oceanic and Atmospheric Administration

Non- PRSA = anything beyond the PRSA boundaries

PRSA = Passaic River Study Area; six-mile stretch extending from the abandoned Conrail Bridge, to a transect 6 miles (31,680 ft) upriver of this bridge.

PRSA DB v. 4.0 = PRSA Database Version 4.0, provided to the Agency in August 2002.

REMAP = Regional Environmental Monitoring and Assessment Program

RI = Remedial Investigation

TIE = Toxicity Identification Evaluation

USACE = United States Army Corps of Engineers

USEPA = United States Environmental Protection Agency

TABLE 1

Table 2

Tierra Solutions, Inc.
Passaic River Study Area

Summary of PRSA GIS Data

Layer	Description	Available Data Type	Data Source	Coordinate System
SIX MILE STUDY AREA				
Bridge Abutments	Along Study Area	.dwg or shapefile	Topo-metrics 1"=100' Original Mylar Positives of Aerial Photometric Survey (1982)	NAD 27 State Plane NJ - Feet
Buildings	Along Study Area	.dwg or shapefile	Topo-metrics 1"=100' Original Mylar Positives of Aerial Photometric Survey (1982)	NAD 27 State Plane NJ - Feet
Bulkheads	Bulkheads along Study Area shorelines	.dwg or shapefile	Topo-metrics 1"=100' Original Mylar Positives of Aerial Photometric Survey (1982)	NAD 27 State Plane NJ - Feet
Highways	Highways crossing Passaic River	shapefile	NJ Spatial Data Warehouse	NAD 27 State Plane NJ - Feet
MileMarkers	Mileage markers along Study Area	.dwg or shapefile	Topo-metrics 1"=100' Original Mylar Positives of Aerial Photometric Survey (1982)	NAD 27 State Plane NJ - Feet
Mudflats	Mudflats along Study Area	shapefile	Topo-metrics 1"=100' Original Mylar Positives of Aerial Photometric Survey (1982) (adjusted to DGPS- surveyed mudflat locations, 1999)	NAD 27 State Plane NJ - Feet
Passaic River	Outline of Study Area	shapefile	Topo-metrics 1"=100' Original Mylar Positives of Aerial Photometric Survey (1982)	NAD 27 State Plane NJ - Feet
Railroad	Railroad running along Study Area	.dwg or shapefile	Topo-metrics 1"=100' Original Mylar Positives of Aerial Photometric Survey (1982)	NAD 27 State Plane NJ - Feet
River Centerline	Centerline for Passaic River	shapefile	Topo-metrics 1"=100' Original Mylar Positives of Aerial Photometric Survey (1982)	NAD 27 State Plane NJ - Feet
Roads	Roads running along Study Area	shapefile	New Jersey Spatial Data Warehouse	NAD 27 State Plane NJ - Feet
Sewer District	Sewer districts that contain or intersect the Study Area	shapefile	New Jersey Spatial Data Warehouse	NAD 27 State Plane NJ - Feet
Tanks	Along Study Area	.dwg or shapefile	Topo-metrics 1"=100' Original Mylar Positives of Aerial Photometric Survey (1982)	NAD 27 State Plane NJ - Feet
Trees	Along Study Area	.dwg or shapefile	Topo-metrics 1"=100' Original Mylar Positives of Aerial Photometric Survey (1982)	NAD 27 State Plane NJ - Feet
UPSTREAM OF STUDY AREA (TO DUNDEE DAM)				
Mile Markers	Mileage markers	shapefile	Interpolated from centerline by BBL	NAD 27 State Plane NJ - Feet
Passaic River	Passaic River from Newark Bay to Little Falls Township	.dwg and shapefile	Digitized from USGS maps: 1995 7.5' Series Elizabeth, NJ Quad 1995 7.5' Series Weehawken, NJ Quad 1955 (photorevised 1981) 7.5' Series Orange, NJ Quad 1997 7.5' Series Hackensack, NJ 1955 (photorevised 1981) 7.5 Series Paterson, NJ Quad 1995 7.5' Series Newark, NJ Quad	NAD 27 State Plane NJ - Feet
River centerline	Centerline from north of mile 6 to Little Falls Township	.dwg and shapefile	Digitized from USGS maps: 1995 7.5' Series Weehawken, NJ Quad 1955 (photorevised 1981) 7.5' Series Orange, NJ Quad 1997 7.5' Series Hackensack, NJ 1955 (photorevised 1981) 7.5 Series Paterson, NJ Quad	NAD 27 State Plane NJ - Feet
OTHER AREAS				
NJ County Boundaries	all NJ county boundaries	shapefile	NJ Spatial Data Warehouse	NAD 27 State Plane NJ - Feet
NJ Municipalities	all NJ municipalities	shapefile	NJ Spatial Data Warehouse	NAD 27 State Plane NJ - Feet
NJ Rivers	all rivers in NJ	shapefile	NJ Spatial Data Warehouse	NAD 27 State Plane NJ - Feet
Regional View	Regional view of the area including Newark Bay, Passaic River, Hackensack River, and Hudson River	shapefile	Compiled from several sources including: NY State GIS Clearinghouse, NJ DEP, and NJ Spatial Data Warehouse	NAD 27 State Plane NJ - Feet

Notes:
1. NAD- North American Datum
2. NY = New York
3. NJ = New Jersey
4. DEP = Department of Environmental Protection
5. USGS = United States Geological Survey

TABLE 2

2/12/2003

Passaic River Study Area
Description of Fields

Database Field	Data Type	Description
SamplingEvent	Text	Description of sampling program associated with a given sample
FieldSampleID	Text	Sample ID from chain of custody
SamplingDate	Date/Time	Date sample was collected
CoordinateNorthing	Number	1927 New Jersey State plane north coordinate for the sample location
CoordinateEasting	Number	1927 New Jersey State plane east coordinate for the sample location
SampleUpperDepth	Number	Start of sample depth interval measured from appropriate surface (river bottom for sediment samples).
SampleLowerDepth	Number	End of sample depth interval, measured from the same datum as SampleUpperDepth
DepthUnits	Text	Units of depth measurement
SampleType	Text	Label indicating purpose of sample collection (analytical or radiochemical analysis). Duplicate samples have "duplicate" appended to the sample type to distinguish them from primary samples.
SampleDuplicated	Text	Used for duplicate samples only; identifies the primary sample duplicated
SampleMatrix	Text	Sample media (i.e., Tissue or Sediment.)
ProcedureClass	Text	Type of analytical result (e.g., Semivolatiles, Metals)
CAS#	Text	Chemical Abstracts Service (CAS) Registry Number for analyte. If actual CAS number could not be found or does not exist for an analyte, a unique identifier with "BBL" as the first three characters is used.
Property	Text	Chemical name of analyte
ResultValue	Number	Numerical result of analysis
Unit	Text	Reporting units of ResultValue
ResultQualifier	Text	Lab and/or validation qualifiers associated with ResultValue
Species	Text	Used for samples with "Tissue" as SampleMatrix only; represents species of animal from which tissue was collected.
TissueType	Text	Used for samples with "Tissue" as SampleMatrix only; represents type of tissue sample (e.g., fillet, whole)
Validation Status	Text	Sampling program validation status.

Passaic River Study Area
Sampling Event Validation Status

Year	Sampling Event Description	Validation Status
1990	Surficial Sediment Investigation	Unvalidated
1991	Core Sediment Investigation	Partial Validation (10% validation of all analytical data; 15% validation of SVOC data; 100% validation of one SDG); QC review for remainder
1992	Core Sediment Investigation	Partial Validation (10% validation of all analytical data; 15% validation of SVOC data; 100% validation of one SDG); QC review for remainder
1993	Core Sediment Investigation (March 1993)	Unvalidated – QC review of data
1993	Core Sediment Investigation (July 1993)	Unvalidated – QC review of data
1993	USEPA Surficial Sediment Program	Unvalidated
1994	Surficial Sediment Investigation	Unvalidated – QC review of data
1995	Biological Sampling Program	Full Validation
1995	RI Sampling Program	Full Validation
1995	Sediment Grab Sampling Program	Full Validation
1995	USACE Minish Park Investigation	Unvalidated
1996	Newark Bay Reach A Sediment Sampling Program	Unvalidated
1997	Newark Bay Reach B, C, D Sampling Program	Unvalidated
1997	Outfall Sampling Program	Unvalidated
1998	Newark Bay Elizabeth Channel Sampling Program	Unvalidated
1999	Late Summer/Early Fall ESP Sampling Program	Full Validation
1999	Newark Bay Reach ABCD Baseline Sampling Program	Method Compliance Review
1999	Sediment Sampling Program	Unvalidated
1999/2000	Minish Park Monitoring Program	Method Compliance Review
2000	BioGenesis Sediment Collection Program	Method Compliance Review
2000	Spring ESP Sampling Program	Full Validation
2001	Supplemental ESP Biota Sampling Program	Full Validation

Passaic River Study Area
Analytical Data Qualifiers

Qualifier	Description
Data Validation Qualifiers	
J	Estimated value (bias undetermined) – The analyte was positively identified; but the associated numerical value is the approximate concentration of the analyte in the sample.
JH	Estimated value (potential high bias) – The analyte was positively identified; but the associated numerical value is the approximate concentration, with a potential high bias of the analyte in the sample.
JL	Estimated value (potential low bias) – The analyte was positively identified; but the associated numerical value is the approximate concentration, with a potential low bias of the analyte in the sample.
UJ	Estimated non-detect - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
UJL	Estimated non-detect (potential low bias) – The analyte was not detected and the report sample quantitation limit is biased low.
UJH	Estimated non-detect (potential high bias) – The analyte was not detected and the reported sample quantitation limit is biased high.
M	The analytical result reported was obtained from a sediment sample found to contain between 50 and 90 percent moisture, and had no other data qualifiers added during the data validation process.
NJ	The organic analysis indicates the presence of an analyte that has been "tentatively identified", and the associated numerical value represents its approximate concentration.
NJH	The organic analysis indicates the presence of an analyte that has been "tentatively identified", and the associated numerical value represents its approximate concentration with a potential high bias of the analyte concentration.
EMPC	Estimated Maximum Possible Concentration.
R	The sample results are rejected. Due to a significant QA/QC problem, the analysis is invalid and provides no information as to whether the analyte is present or not.
Laboratory Qualifiers	
B	Inorganics – The reported value was obtained from an instrument reading that was less than the sample quantitation limit (SQL).
	Organics – The associated analyte was also detected in the method blank.
D	The organic analyte was quantitated from a diluted analysis.
E	Inorganics – The reported value is estimated because of the presence of an interference.
	Organics – The associated compound concentration exceeded the calibration range of the instrument.
G	Organic data indicated the presence of a compound that meets the identification criteria; the result is below the SQL but above the MDL.
N	The inorganic analysis is associated with a spike sample not within control limits.
P	The percent difference between the primary and confirmation column for pesticide/Aroclor analyses is greater than 25 percent.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
*	The inorganic duplicate analysis was not within the established QC control limit.[1]
Partially Validated/Unvalidated Data Qualifiers	
Sampling programs listed in the file titled "Validation Status" that are identified as partially validated or as unvalidated have no laboratory qualifiers retained, with the exception of those described below. Only detect/non-detect qualifiers are appropriate for use by the general data user.	
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
ND	The analyte was analyzed for, but was not detected.
R	The sample results are rejected. Due to a significant QA/QC problem, the analysis is invalid and provides no information as to whether the analyte is present or not.

[1] QC control limit as specified by the laboratory

PRSA Technical Meeting
February 13, 2003
East Brunswick, NJ

Sign In Sheet

Name	Company	Phone Number	Email Address
Bob Romagnoli	BBL	315 446-9120	RR@BBL-INC.com
Rick Winfield	EPA	212-637 4362	winfield.richard@epa.g
Cliff Firstenberg	Tierra	757-258-7720 732-246-5851	cefirstenberg@cox.net
Lisa Scaggdi-Greco	MPI	201-398-4388	lgreco@pirnie.com
Bruce Fidler	MPI	201-398-4365	bfidler@pirnie.com
Rick McNutt	Tierra Solutions	732-246-5849	RMCNUTT354@aol.com